


# i35

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## Body Composition Result Interpretation



I35 Result Sheet



Model: I35

ID: mediana12345 Gender: Male Height: 175.0 cm Age: 30

Name: Test Current: 2019.02.01 10:00 Previous: 2019.01.01 09:00

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### Weight Control

BMI (kg/m<sup>2</sup>): **22.9** (18.5 - 25.0)

FMI (2.78 - 3.60kg/m<sup>2</sup>): **3.92**

FFMI (15.72 - 20.40kg/m<sup>2</sup>): **18.94**

Obesity Degree (%): **103.9**

Desirable Weight (kg): **68.5**

Weight Control (kg): **-1.5**

Fat Control (kg): **-1.5**

Muscle Control (kg): **0.0**

### Extracellular Water Ratio

0.372 (Low 0.35 - High 0.39)

### Abdominal Obesity Analysis

Waist Circumference (69.3 - 84.8cm): **84.1**

Abdominal Fat Ratio (0.80 - 0.90): **0.83**

Visceral Fat Area (0.0 - 100.0cm<sup>2</sup>): **79.8**

Subcutaneous Fat Area (0.0 - 200.0cm<sup>2</sup>): **128.7**

VSIR (0.0 - 0.4): **0.62**

Mediana Score  
**98**

### Intake & Consumed Calories

BMR (kcal)	1623
Total Energy Expenditure (kcal)	2434
Target Body Fat (%)	15.0
Exercise Intensity (HR/min.)	133-161
Calorie Consumption (kcal/h)	490
Estimated Completion (Week)	5

\*Based on Jogging(30min/day)

### Impedance

kHz	IA	RA	TR	LL	RL
5	321.4	321.5	27.4	246.4	257.5
50	280.7	282.8	22.4	218.3	227.7
100	272.3	272.7	20.5	208.7	209.1
250	268.6	268.8	18.9	202.6	203.2

### Body Composition Analysis

Values (Standard)	Total Body Water (l)	Protein (kg)	Mineral (kg)	Body Fat (kg)
	45.7 (35.3 - 47.6)	9.5 (9.5 - 12.9)	2.80 (3.37 - 4.56)	12.0 (6.7 - 13.5)
Total Body Water (l)	45.7 (37.3 - 46.4)			
Muscle Mass (kg)		55.8 (50.9 - 57.3)		
Fat Free Mass (kg)			58.0 (53.9 - 60.6)	
Weight (kg)				70.0 (56.7 - 76.6)

### Skeletal Muscle & Body Fat Analysis

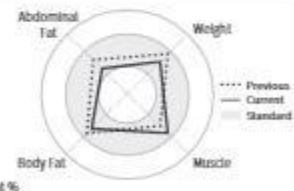
Weight (kg)	Skeletal Muscle (kg)	Body Fat (kg)
70.0	31.3	12.0
Previous	30.2	13.3

### Segmental Analysis & Body Balance

Segment	Current (kg)	Standard (kg)
Upper Body	27.00	27.00
Lower Body	43.00	43.00

### Body Type Analysis

Standard	Muscular	Lean Muscular	Lean	Ordinary	Thin	Skinny	Stocky	Overweight	Obese	Skinny Fat
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### Body Composition History

Date	Weight (kg)	Skeletal Muscle (kg)	Body Fat Percentage (%)
*18.07.01	68.2	28.7	22.0
*18.08.01	68.3	29.2	19.5
*18.09.01	68.1	29.3	19.3
*18.10.01	68.0	29.4	18.5
*18.11.01	74.0	30.6	19.1
*18.12.01	69.7	29.7	18.9
*19.01.01	73.0	31.0	19.0
*19.02.01	70.0	31.3	17.1



QR code reading allows you to manage your body composition measurement results with your smartphone

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**Body Composition Analysis**

The human body consists of four major components – body water, protein, body fat and minerals, comprising total body weight.

	Total Body Water (L)	Protein (kg)	Mineral (kg)	Body Fat (kg)
Values (Standard)	<b>45.7</b> (35.3 - 47.6)	<b>9.5</b> (9.5 - 12.9)	<b>2.80</b> (3.37 - 4.56)	<b>12.0</b> (6.7- 13.5)
Total Body Water (L)	<b>45.7</b> (37.3 - 46.4)	<b>55.8</b> (50.9 - 57.3)		
Muscle Mass (kg)		<b>Skeletal Muscle: 31.3</b> (29.1 - 35.6)		
Fat Free Mass (kg)		<b>58.0</b> (53.9 - 60.6)		
Weight (kg)				<b>70.0</b> (56.7 - 76.6)

**Body water** takes up the largest share of body composition, carries oxygen and essential nutrition to cells, and removes waste materials out of the body. Note individuals Total body water higher than the reference range does not indicate water retention. Please see the Extracellular water ratio.

**Protein** is one of the essential components of body composition and is primarily used for formation of bone and muscle tissues, and the immune system.

**Minerals** are for the majority (82%) osseous, serving as a reliable indicator of bone density. Lack of minerals may indicate lower bone density which may indicate osteoporosis.

The human body consists of 5~6% of minerals. minerals fall into two types: osseous and non-osseous. Osseous minerals are used for bone development. Non-osseous minerals are contained in total body fluid or muscle and are used to maintain main body functions.

**Body fat** is essential for health, and it falls into two types: essential fat & storage fat. Storage fat is mostly found over the subcutaneous layer of skin or around the stomach area, to protect internal organs or to reserve energy for later use. Essential fat is vital for survival and reproduction and is found in a variety of important human organs, such as brain, heart, lungs, liver, kidneys and muscle.

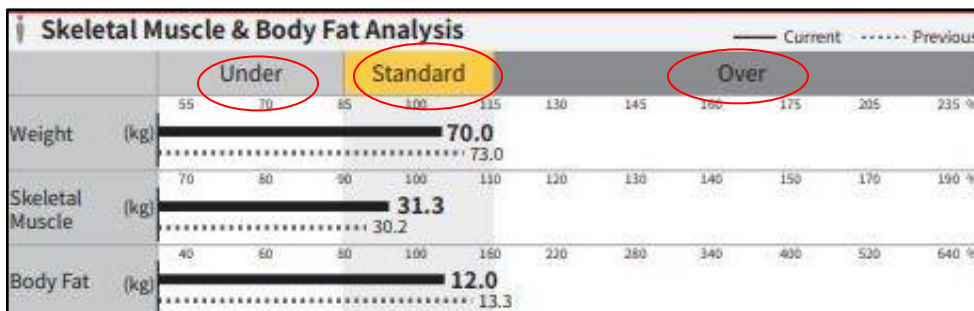
**Fat Free Mass** refers to the rest of body composition “minus” total body fat weight.

**Muscle mass** - There are three types of muscle – skeletal muscle for movement, cardiac muscle your heart, and visceral muscle internal organs. Skeletal Muscle can be increased through exercise and as such is measured.

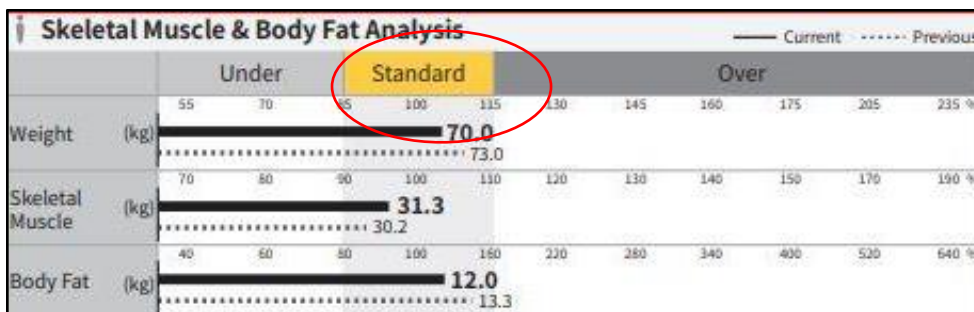
**The Skeletal & Body Fat Analysis** uses weight and the 2 other major components of total weight Skeletal muscle and Body fat to help indicate body composition

Skeletal Muscle is the muscle you can work out at the gym (i.e. quads, biceps, etc.). Changes in diet and exercise will change your Skeletal muscle and Body Fat, which will in turn affect your overall weight. This section can help determine what fluctuations in weight really mean.

Your results sheet will display these bar graphs, which are divided into 3 ranges: under, standard, and over. You can see which range your outputs fall into by looking at the lengths of each bar.

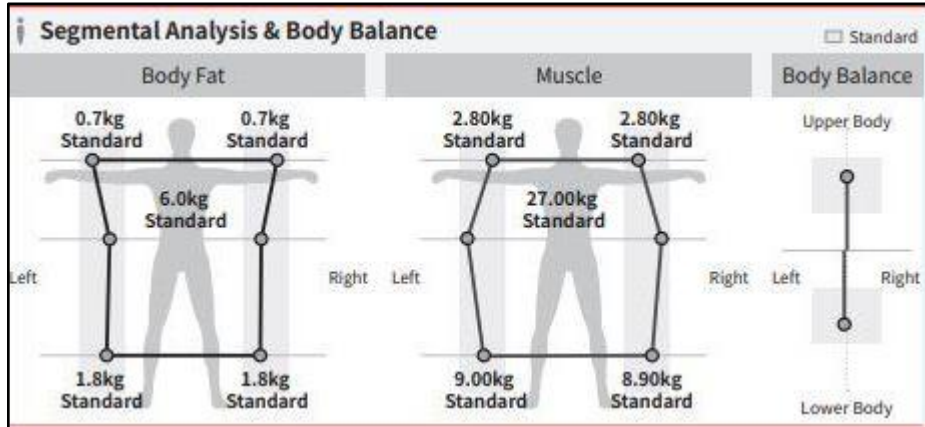


\*The centre of the normal range is the 100 mark, which is your ideal value.



\*Aim for fat to be: Standard or under range.  $\leq 100$  (under/Standard) and SMM to be in the normal or over range  $>100$  (Standard/Over).

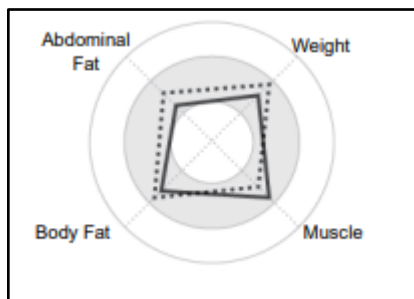
**Segmental Analysis and Body Balance** reveals how your Muscle and fat Mass is distributed within your body. It also evaluates your right/left balance to determine balanced muscle development.



For **Muscle** each segment it should be in the standard or over range for a strong body. Aim for corresponding segments (ex. Right Arm and Left Arm) to have similar values.

For **Body Fat** aim to be in the standard or under range. This section is a good tool to track fat loss in each segment of the body.

**Body Type Classification Table** uses BMI and Body fat percent to give a basic body type estimation.

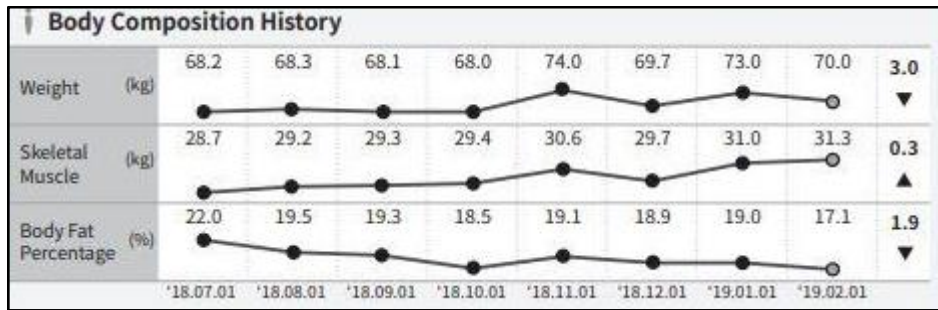


It presents your body type on a square table, each end point representing abdominal fat rate, weight, total body fat, and muscle. The closer its form gets to perfect square and belongs to the standard range, the more balanced your body shape is.

**Body Composition History** tracks the historical trending of your body compositional changes, using weight, skeletal muscle and percent body fat.

Body fat percentage is the ratio of your body fat mass divided by your weight. is a more accurate representation of your obesity risk than weight alone and BMI

The recommended standard body fat percent ranges are 10-20% for males and 20%-30% for females but there are allowances outside of these ranges depending on age and other factors.



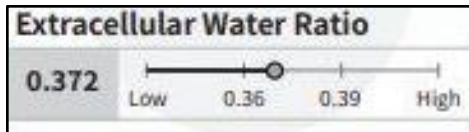
**Weight Control** This section is helpful to set goals, as well as giving Body Mass Index, Fat Mass Index and Fat-free mass index. This section is designed to help you reach your ideal body composition.

Body Mass Index (BMI) is an unreliable representation of your weight because it calculates your obesity strictly on your height and weight, resulting in professional athletes being labeled obese.

Depending on your current Muscle-Fat balance, this section of the Result Sheet will recommend adjusting fat mass and/or Skeletal Muscle to reach the target Suggested weight. If you are above the recommended body fat range, it will suggest reducing body fat and maintaining or increasing muscle mass.

These recommendations are meant to be general guidelines for helping individuals towards optimal health. However, you may have your own set of goals, and these should be discussed prior to planning a routine for meeting those goals.

Weight Control	
BMI (kg/m <sup>2</sup> )	22.9 (18.5 - 25.0)
	Under    Standard    Over
FMI (2.78 - 3.60kg/m <sup>2</sup> )	3.92
FFMI (15.72 - 20.40kg/m <sup>2</sup> )	18.94
Obesity Degree (%)	103.9
Desirable Weight (kg)	68.5
Weight Control (kg)	-1.5
Fat Control (kg)	-1.5
Muscle Control (kg)	0.0



Extracellular Water Ratio = Extracellular Water / Total Body Water

Ratio of Extracellular Water to Total Body Water; an important indicator of body water balance. In a healthy state, your ECW/TBW ratio should fall within the range 0.360 to 0.390. a ratio of .40 or higher indicates higher levels of extracellular water which could be caused by Edema and should be diagnosed by a health professional.

### **Abdominal Obesity Analysis**

Waist Circumference (69.3 ~ 84.8cm)	84.1
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Waist circumference is closely related to visceral fat, and because of its convenient and inexpensive usage, it is widely used index in evaluating abdominal fat storage.

Abdominal Fat Ratio (0.80 ~ 0.90)	0.83
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Abdominal Fat ratio is calculated through segmental analysis. Which is another indicator of body fat storage through the torso.

Cross sectional amount of fat surrounding internal organs such as the liver, pancreas, and intestines and has a strong correlation to increased risk of cardiovascular disease, diabetes, cancer, and Alzheimer's. It is advised to stay below 100 for optimal health and to reduce health risks.

Visceral Fat Area (0.0 ~ 100.0cm <sup>2</sup> )	79.8
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Subcutaneous fat in the body is located under the skin and above the muscle. Men and women have different typical distributions of subcutaneous fat, with women having more on their hips and thighs subcutaneous fat has less association with diseases in comparison to the visceral fat but should still be monitored.

Subcutaneous Fat Area (0.0 ~ 200.0cm <sup>2</sup> )	128.7
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A VSR Ratio above .4 indicates a higher level of visceral fat to Subcutaneous Fat where individuals are at higher health risk from diseases such as diabetes, heart disease etc

VSR (0.0 ~ 0.4)	0.62
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Visceral to Subcutaneous Fat Ratio(VSR) = Visceral Fat Area / Subcutaneous fat Ratio

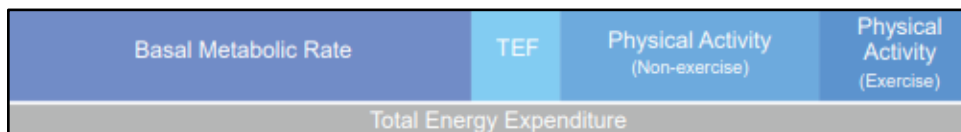
**Basal Metabolic Rate (BMR)** is the number of calories burned at rest over the course of one day. Your BMR will increase as you gain more muscle mass. You can use your BMR and your daily activity level to calculate the necessary number of calories you require to help meet your goals.

BMR	(kcal)	1623
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**MEDIANA's BMR** is calculated using the following formula

$$REE(kcal) = 370 + 21.6 * \text{Fat Free Mass}$$

Total Energy Expenditure	(kcal)	2434
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In general, energy is used for three purposes: basic metabolic rate, physical activity, and Thermic effect of food. Total Energy Expenditure is the sum of energy consumed by these three parameters throughout the day. TEF and Physical activity differ from person to person, and this is just a suggestion based on an average person.

Target Body Fat	(%)	15.0
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Target Body Fat Standardized body fat percentage is displayed. Male 15% Female 25%

Exercise Intensity	(HR/min.)	133~161
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In general, exercise intensity is indicated by (VO2 max), but is difficult to measure and verify, heart rate per minute is used as a guide instead.

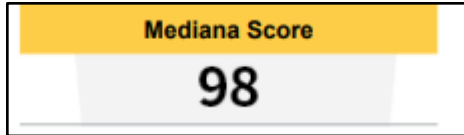
Calorie Consumption	(kcal/h)	490
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Expected calorie consumption after performing an hour of jogging

Estimated Completion (Week)	5
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Estimated Completion Based on daily 1-hour exercise with the recommended intensity performed, Results may vary depending on factors such as calorie consumption, other activity as is only to be used as a guide.





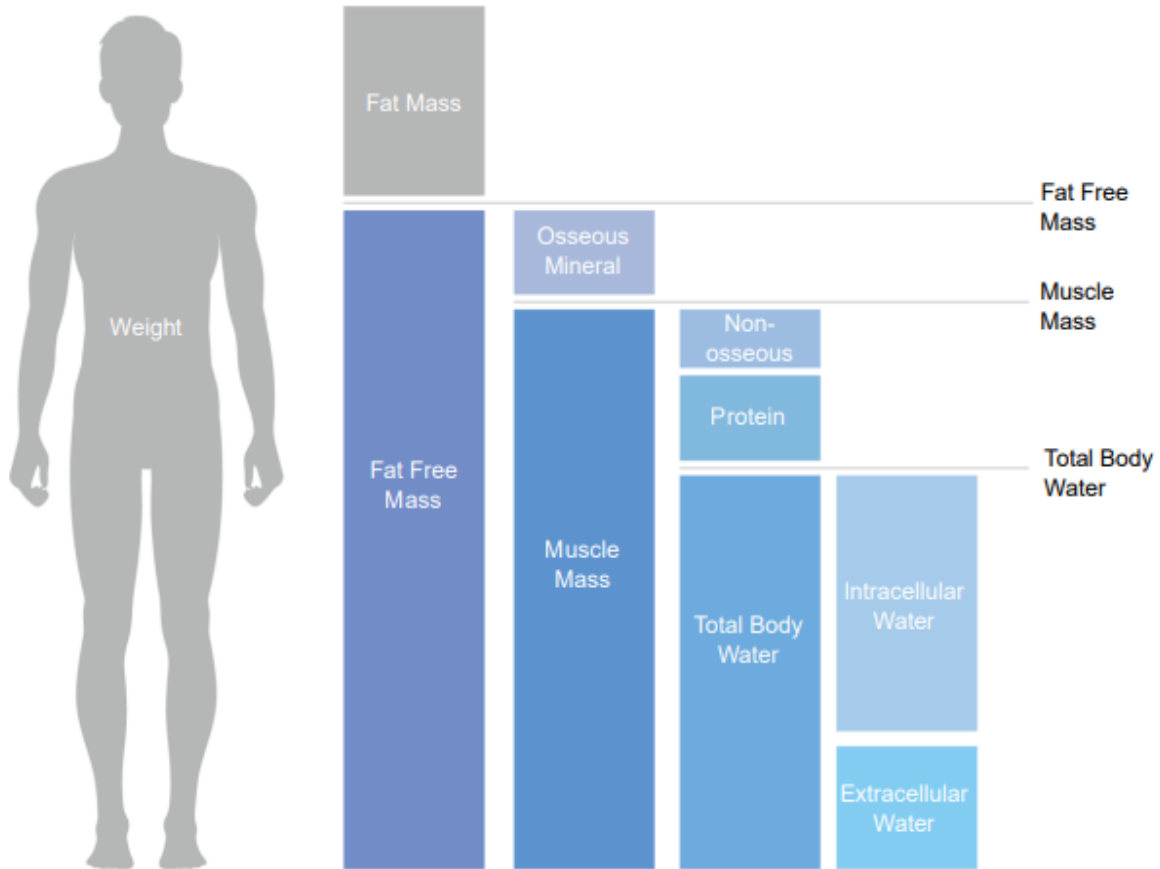
MEDIANA score, provides overall health analysis by using utilising the company’s own technology and measurements such as body fat percentage and muscle mass. Scoring from 0 to 100 points, where 100 points being the maximum and any possible score exceeding being rounded to 100. An easy to track marker for body composition improvement as body composition is improved based on suggestions the score increases.

kHz	LA	RA	TR	LL	RL
5	321.4	321.5	27.4	246.4	257.5
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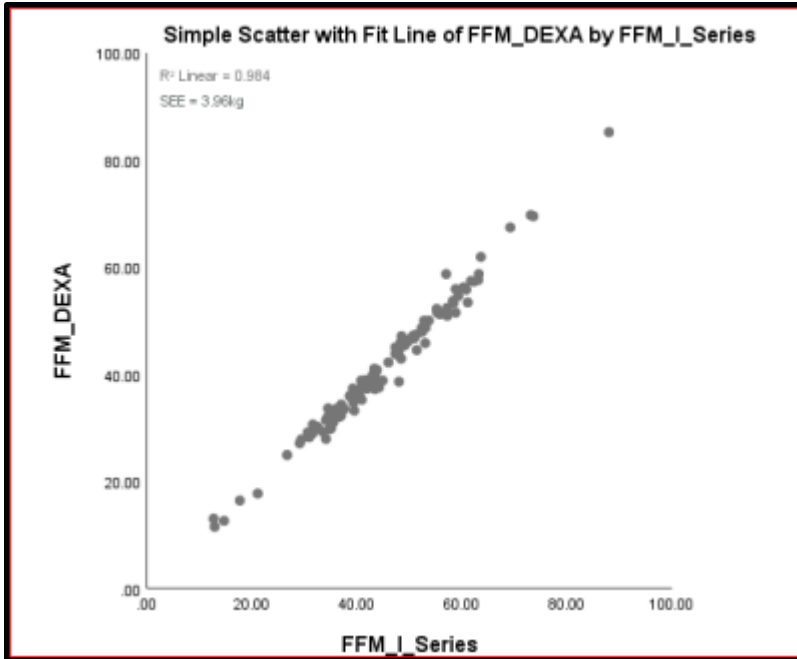
Bioelectrical impedance analysis is based on the fact that tissues with high water content act as a conductor of an electrical current, whereas fat tissue due to its density interferes with electrical conductivity. Therefore, the more fat there is in the body, the higher the impedance.

**Further questions about your results? Contact us at [info@vitalbodyscan.co.nz](mailto:info@vitalbodyscan.co.nz)**

Body Composition Model See below for body components modeling. You can see weight falling into two categories: fat mass and fat free mass, FFM once again classified into three sub-categories of minerals, protein and body water.



DEXA method is regarded as Golden Standard, and serves best for accurate analysis of body composition: FFM, body fat mass and muscle mass. DEXA also provides segmental analysis results, thus serving as a perfect barometer for the accuracy of BIA. The result of comparison between DEXA and I35 is as follows:



Under clinical testing the I35, shows a correlation of 0.984 to DEXA , which means high accuracy.

CT(Computerized Tomography) Visceral fat level of I series body composition analyzer is based on CT clinical test data

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